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Vendor Financial Watch

QUARTERS 3 & 4, 1988
PERFORMANCE

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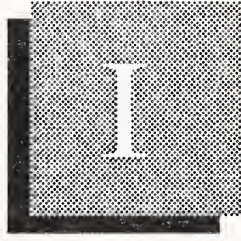
INFORMATION SERVICES VENDOR FINANCIAL WATCH

Quarters 3 & 4, 1988
Performance

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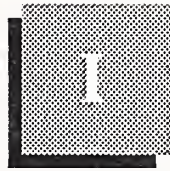
Vendor Financial Watch

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Introduction





Introduction

The Vendor Financial Watch (VFW) is a quarterly INPUT comparison of up-to-date financial reports of public information processing/network services, professional services, software products, and turnkey systems companies, both for comparative purposes (vendor to vendor) and to enable participants in a given sector of the information services market to monitor the overall growth of their sector.

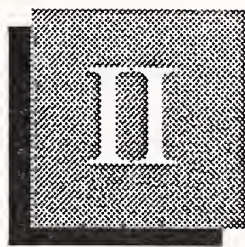
Each sector of the information services market is analyzed separately, from both a revenue and a net income standpoint. The growth trends are analyzed in the last three columns of each data sheet in increasing calendar sequence.

Each information services market sector is also commented on separately, highlighting individual company successes and failures and the trend in the market sector as a whole. Footnotes emphasizing extraordinary quarterly results are explained at the end of each section.

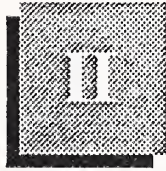
The summary analysis at the back of the VFW report analyzes the comparative trends between sectors and comments on the trend of the total information services market. This section is particularly important since it identifies growth patterns very clearly.

This quarterly Vendor Financial Watch is intended as a planning tool for market planning executives and as an information newsletter for company executives. The data contained herein are extracted from published sources, annual reports, and 10-K reports.

This issue covers 116 information services vendors.



Data Reported



Data Reported

The VFW report is divided into two sections:

- Information services delivery mode analysis.
- Total information services industry financial performance.

Financial data provided include each vendor's revenue and net income (reported on a calendar quarterly basis) and comparisons on performance for:

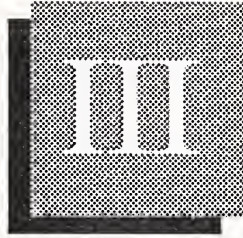
- 1988 versus 1987 (year on year).
- Last nine months' results compared to the year-earlier period.
- Last six months' results compared to the year-earlier period.

Fiscal quarterly revenue is approximated to calendar quarterly revenue as follows:

- Quarterly revenue reported as of February, March, and April is reported as first quarter.
- Quarterly revenue reported as of May, June, and July is reported as second quarter.
- Quarterly revenue reported as August, September, and October is reported as third quarter.
- Quarterly revenue reported as November, December, and January is reported as fourth quarter.

Fiscal year-end dates are provided in column 2 so that actual quarters for each company can be identified. Values that are followed by an asterisk (*) are INPUT estimates, pending release of the final results from the vendor. These estimates are included so that the overall totals for each sector may be as complete as possible.

Niche



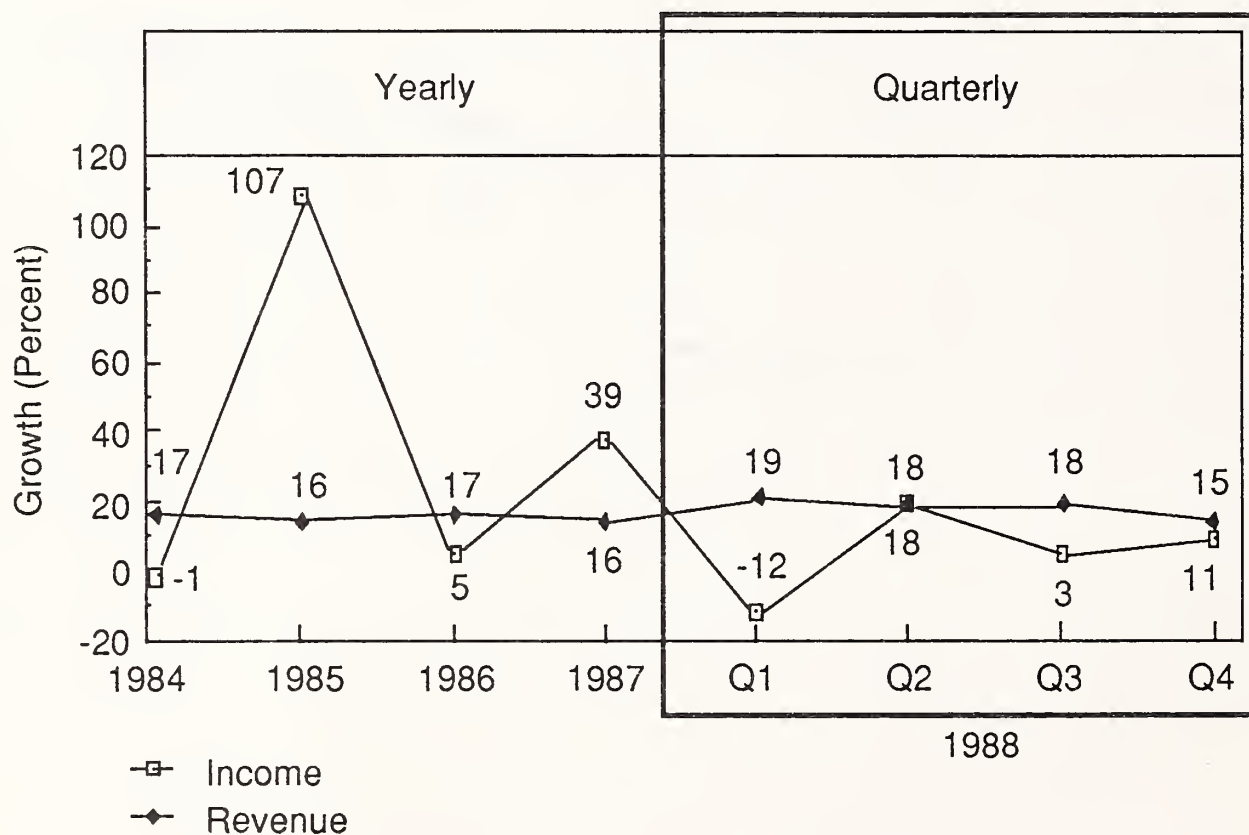
for the companies in these
two sections please pull
latest quarterly reports
I'd like to update these sections
next week

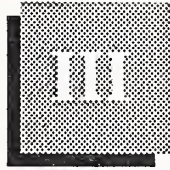
Processing/Network Services Trends Analysis

Cecilia suggests a search log
on Dirmoq.

Change code to VT -

PUBLIC PROCESSING/NETWORK SERVICES VENDORS





Processing/Network Services Trends Analysis

Growth for the processing/network services group has remained relatively constant during the past five years, ranging between 16% and 17% per year. Processing services represent a mature segment of the information services industry, characterized by slower, steadier growth than some of the other segments, such as systems software products.

However, growth opportunities do exist within the processing services market. One example is the recent trend for companies in transition to handle their processing needs by outsourcing. (Outsourcing is the use of external computing centers to handle internal data. Hardware and systems software is provided by the outsourcing vendor, while the applications are provided by the customer.) Many other growth opportunities are available in the network services portion of the processing/network services market.

The largest of the processing/network services vendors that INPUT tracks in this Vendor Financial Watch are Automatic Data Processing (ADP), First Financial Management, National Data, Shared Medical Systems, Systematics, and Telecredit. These companies together represent the largest amount of growth within the group of public processing/network services companies tracked.

Growth in earnings for this group has fluctuated significantly during the past five years. Earnings grew only 4% in 1988, compared with 39% in 1987 and 5% in 1986. The primary contributor to the low growth rate in 1988 was Telecredit, which took a \$17.9 million loss during first quarter. Telecredit decided in May 1988 to restructure and take as a one-time write-off its Light Signatures subsidiary. The reported overall loss was despite outstanding results achieved by payment services.

Profitability for the processing/network services group is running slightly above average for the information services industry as a whole. During 1988, profit margin maintained by the group was 8%, compared to the industry average of 7%.

PUBLIC PROCESSING/NETWORK SERVICES COMPANIES

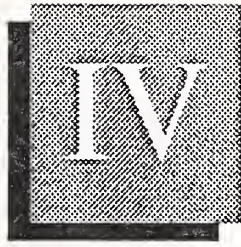
		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ADP	30-Jun	373.7	355.3	361.3	376.7	1467.0	418.0	393.2	396.1	409.5	1616.8	10	10	9
COMDATA HOLD.	31-Dec	25.2	25.9	25.5	24.0	100.6	24.9	25.8	26.8	28.5	106.0	5	8	12
COMNET	31-Mar	11.2	10.2	11.2	11.3	44.0	11.9	10.0	8.7	10.8	41.4	-6	-10	-13
COMP-U-CHECK	30-Nov	2.1	1.9	2.0	1.7	7.7	2.3	2.5	2.3	1.6	8.7	13	14	6
COMPUTER LAN.	31-Dec	33.4	20.9	19.6	28.3	102.1	41.7 ¹	24.1	20.2	31.4	117.4	15	10	8
COMPUTER SVCS	28-Feb	3.3	3.0	3.2	3.2	12.7	3.2	3.2	3.4	3.7	13.5	7	10	12
CONCORD COMP.	30-Sep	4.4	4.7	5.3	6.8	21.2	6.7	6.9	6.8	7.0	27.4	29	23	14
CYCARE	31-Dec	14.9	16.9	17.2	18.7	67.7	20.6	21.2	20.6	21.6	84.0	24	20	18
DST SYSTEMS	31-Dec	31.9	35.6	35.6	34.4	137.5	33.8	33.5	36.9	34.2	138.4	1	-1	2
DYATRON	31-Dec	8.3	8.9	9.7	9.7	36.6	9.5	10.1	10.1	13.2	42.9	17	18	20
FDP	30-Nov	3.0	4.1	4.0	3.2	14.2	3.2	3.4	3.3	4.1	14.0	-1	-4	3
FIRST FIN. MGMT	31-Dec	26.5	27.4	29.4	91.9 ²	175.1	85.1	94.8	102.6	141.3	423.8	142	128	101
FISERV	31-Dec	20.5	21.4	21.0	22.6	85.5	23.9	27.1	36.2	37.8	125.0	46	55	70
GTECH	25-Feb	26.9	25.0	34.8	40.6	127.3	39.1	32.9	30.3	43.7	146.0	15	6	-2
HALE SYSTEMS	31-Mar	1.1	1.1	1.2	1.0	4.4	0.7	0.7	0.8	0.8	3.0	-31	-30	-28
ISI SYSTEMS	30-Jun	8.2	8.8	8.5	9.0	34.4	9.7	10.5	11.1	10.7	42.0	22	23	25
M/A/R/C	31-Mar	12.7	14.6	13.6	15.0	55.9	16.1	14.4	15.1	16.7	62.3	11	7	11
NATL DATA	31-May	40.0	42.0	43.4	42.5	167.9	44.2	47.0	48.6	54.4	194.2	16	17	20
NATL FSI	31-Dec	4.1	3.8	3.4	6.0	17.3	4.5	4.6	5.0	4.9	19.0	10	10	6
PAYCHEX	31-May	16.6	17.0	18.0	19.2	70.9	20.7	21.5	24.9	24.0	91.1	29	30	31
PAY-FONE	30-Jun	1.6	1.4	1.5	1.5	6.0	1.6	1.4	1.5	1.5	6.0	0	-1	-1
SCICOM DATA	30-Jun	3.3	4.0	3.8	4.6	15.6	3.9	4.8	4.5	5.1	18.3	18	17	15
SCS/COMPUTE	30-Apr	13.4	1.5	1.7	6.3	22.9 ³	15.0 ⁴	2.5	3.2	9.7	30.4	33	62	61
SEI	31-Dec	29.9	30.4	29.9	32.2	122.4	33.3	32.3	33.2	33.1	131.9	8	7	7
SHARED MEDICAL	31-Dec	96.6	95.9	99.1	99.1	390.7	95.4	92.8	95.0	95.5	378.7	-3	-4	-4
SYSTEMATICS	31-May	37.8	38.3	40.4	43.9	160.3	46.1	49.1	47.1	52.0	194.3	21	21	18
TELECREDIT	30-Apr	32.1	32.1	30.1	42.1	136.4	35.4	35.3	36.4	46.7	153.8	13	13	15
TOTAL SYS. SVCS	31-Dec	9.7	10.8	12.0	13.8	46.3	13.2	13.8	14.0	15.2	56.2	21	18	13
TSR	31-May	5.9	6.1	6.3	6.1	24.4	5.9	5.8	5.3	5.4	22.4	-8	-11	-14
WORLCO DATA	31-May	3.2	2.7	2.8	2.8	11.5	1.9	3.1	3.1	4.0	12.1	5	23	27
TOTALS		901.2	871.7	895.2	1018.2	3686.4	1071.0	1028.3	1053.1	1168.1	4321.0	17	17	16

PUBLIC PROCESSING/NETWORK SERVICES COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 %(+/-)	Last 3 Rolling Quarts	Last 2 Rolling Quarts
ADP	30-Jun	39.3	40.1	30.4	40.1	149.8	51.2 ⁵	48.6	34.4	44.0	178.2	19	15	11
COMDATA HOLD.	31-Dec	4.0	3.3	-0.4	-5.6 ⁶	1.2	-1.9	-1.9	-1.3	-3.7	-8.8	-812	-154	17
COMNET	31-Mar	1.6	0.4	0.5	0.5	3.0	-1.3	0.7	-0.3	0.1	-0.8 ⁷	-127	-64	-121
COMP-U-CHECK	30-Nov	0.1	0.1	-0.1	-1.2	-1.1	0.1	0.3	0.1	-0.9	-0.4	63	59	39
COMPUTER LAN.	31-Dec	4.3	-2.4	-2.9	-0.5	-1.5	5.1 ⁸	-2.3	-5.0	0.3	-1.9	-24	-19	-37
COMPUTER SVCS	28-Feb	0.3	0.2	0.2	0.3	1.1	0.3	0.3	0.3	0.5	1.4	24	37	40
CONCORD COMP.	30-Sep	0.1	0.3	0.4	0.6	1.5	0.7	0.7	0.7	0.8	2.9	100	63	48
CY CARE	31-Dec	1.7	0.9	1.0	0.1	3.8	1.1	1.3	0.2	-2.1	0.5	-87	-129	-270
DST SYSTEMS	31-Dec	4.3	5.1	5.3	5.1	19.8	5.0	3.8	2.4	0.4	11.6	-41	-57	-73
DYATRON	31-Dec	0.5	0.6	0.9	1.5	3.5	0.8	0.9	1.0	1.9	4.6	30	25	21
FDP	30-Nov	-0.2	0.1	0.3	0.1	0.3	0.4	0.1	0.1	0.3	0.9	209	9	25
FIRST FIN. MGMT	31-Dec	1.9	2.3	3.0	4.4	11.6	5.3	6.4	7.5	10.1	29.3	152	147	136
FISERV	31-Dec	1.7	1.7	1.8	2.0	7.2	2.1	2.2	2.4	2.4	9.1	27	27	27
GTECH	25-Feb	0.8	0.9	1.4	2.5	5.7	-0.1	0.1	0.4	2.7	3.1	-45	-35	-22
HALE SYSTEMS	31-Mar	0.3	-0.1	-0.1	-0.2	-0.1	-0.3	-0.2	0.4	-0.1	-0.2	-285	131	230
ISI SYSTEMS	30-Jun	1.1	1.2	1.2	1.3	4.8	1.5	1.7	1.8	1.8	6.8	42	44	45
M/A/R/C	31-Mar	0.8	0.6	0.7	0.9	2.9	0.9	0.7	0.6	0.8	3.0	2	-3	-8
NATL DATA	31-May	3.5	3.5	3.7	3.9	14.7	4.3	4.5	4.3	4.5	17.6	20	19	15
NATL FSI	31-Dec	0.1	-0.2	-1.3	0.2	-1.2	0.1	0.1	0.1	0.3	0.6	149	138	135
PAYCHEX	31-May	1.1	1.4	1.8	2.1	6.3	1.5	1.6	2.8	2.5	8.4	33	33	38
PAY-FONE	30-Jun	-0.1	-0.5 ⁹	0.1	0.0	-0.6	0.0	0.0	0.0	0.0	0.0	100	100	-100
SCICOM DATA	30-Jun	0.2	0.3	0.3	0.4	1.1	0.2	0.4	0.3	0.4	1.3	19	22	11
SCS/COMPUTE	30-Apr	4.3	-1.2	-1.2	-0.1	1.8	4.8	-2.2	-2.0	0.6	1.2	-37	-48	-11
SEI	31-Dec	1.7	2.2	2.7	2.9	9.4	3.3	3.6	3.2	3.1	13.2	40	28	14
SHARED MEDICAL	31-Dec	12.8	10.7	10.9	10.9	45.3	10.5	8.5	4.2	6.1	29.3	-35	-42	-53
SYSTEMATICS	31-May	3.6	2.3	2.9	4.2	13.0	4.3	4.1	3.7	5.1	17.2	32	37	24
TELECREDIT	30-Apr	2.6	2.8	3.2	4.9	13.5	-17.9 ¹⁰	5.7	5.6	7.6	1.0	-93	72	62
TOTAL SYS. SVCS	31-Dec	1.4	1.5	1.9	2.4	7.2	1.9	2.2	2.5	3.0	9.6	33	32	28
TSR	31-May	0.2	0.1	0.2	0.2	0.6	0.2	0.1	0.1	0.0	0.4	-35	-56	-71
WORLCO DATA	31-May	0.0	-0.4	-0.4	-0.2	-0.9 ¹¹	-1.4	0.1	0.1	0.2	-1.0	-12	143	155
TOTALS		94.0	78.0	68.3	83.6	323.9	81.2	92.1	70.6	92.7	336.6	4	11	8

Footnotes

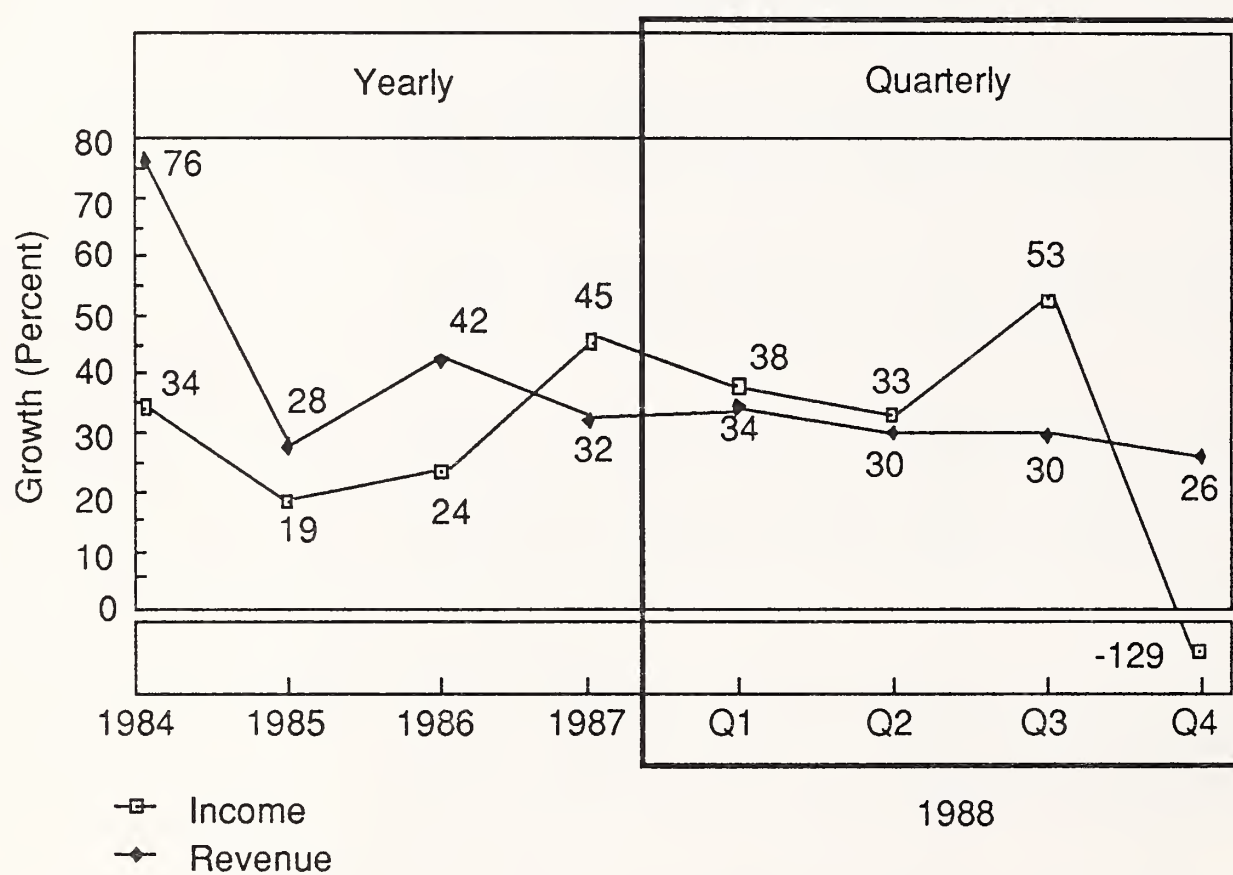
1. Computer Language's seasonal results are skewed by income tax business.
2. First Financial Management's significant growth resulted primarily from the acquisitions of First Data Management (data processing), NaBANCO (third-party credit card authorization), and Endata (imaging).
3. SCS/Compute's results included the acquisition of Accountants Microsystems Inc. (AMI).
4. SCS/Compute generates most of its revenue and all of its profits during the fourth quarter of its fiscal year.
5. ADP revenues and earnings for the quarter were buoyed by continued strength throughout its Employer Services business. This strength was partially offset by reduced transaction levels and increased product investments in Brokerage Services.
6. Comdata Holdings recorded as an expense \$4.8 million as the established reduction in the book value of certain assets that will result from its merger with Comdata Network.
7. COMNET's 1988 losses were attributed primarily to start-up costs and production inefficiencies associated with Ford Laboratories' new manufacturing and distribution facility in Maryland. Ford Laboratories is a wholly-owned COMNET subsidiary.
8. See footnote 1.
9. Pay-Fone's loss included the following nonrecurring expenses: litigation settlements paid to franchises, including related legal expenses; termination of an employment contract and related expenses paid to a former president; and special proxy contest costs.
10. Telecredit decided in May 1988 to restructure and take as a one-time write-off its Light Signatures Inc. subsidiary. The reported overall loss is despite outstanding results achieved by payment services.
11. Worlco Data Systems' losses have been attributed to delays in the completion of a custom turnkey system developed for a large floorcovering company and a major expansion of personnel and computer systems in conjunction with a move to new facilities. In addition, the company reported a reduction in margins due to cut-backs at some publications and discontinued operations at others.

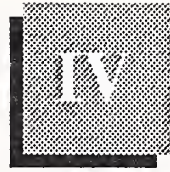


Electronic Information Services Trends Analysis



PUBLIC ELECTRONIC INFORMATION SERVICES VENDORS





Electronic Information Services Trends Analysis

INPUT elected to examine the public electronic information services vendors separately from the rest of the processing/network services group due to the difference in the market for these services.

Electronic information services represent a newer market than some of the other processing and network services. Electronic information services include data bases, news services, and videotex services. Growth for companies focusing on providing electronic information services has been phenomenal during the past few years. In 1984, revenues grew 76% over the previous year for the companies INPUT tracked. Growth has slowed but remains high at 30% for 1988.

Telerate, the largest of the public electronic information services vendors, grew 33% in 1988 and represents the most significant growth for the group as a whole. CUC International has also contributed significantly to the group's growth.

Earnings growth has been more volatile for these vendors. Earnings grew 45% in 1987 but dropped 9% in 1988. CUC International's fourth quarter performance was responsible for the drop. The company changed its accounting methods and took a \$30.6 million loss during the quarter. During the first three quarters of the year, the electronic information services group performed well. Earnings grew 38%, 33%, and 53% respectively during first, second, and third quarters from the same quarters in 1987. During fourth quarter, earnings dropped 129% from fourth quarter 1987.

Despite CUC International's performance, profitability for this group of vendors was 9% for 1988, which was above the average for information services vendors overall.

Note that CCX Network has changed its name to Acxiom Corporation.

PUBLIC ELECTRONIC INFORMATION SERVICES COMPANIES

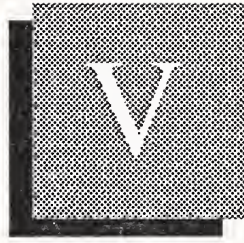
		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ACXIOM	31-Mar	8.4	8.9	14.8	15.9	48.1	14.3	16.2	18.0	19.8	68.3	42	36	23
CUC INTL	31-Jan	45.2	48.9	51.1	53.4	198.5	58.2	64.5	71.1	77.5	271.3	37	39	42
EPSILON	31-May	11.7	10.6	9.4	13.5	45.2	13.3	13.5	12.3	14.2	53.3	18	19	16
INFO. RESOURCES	31-Dec	26.0	28.2	26.1	25.1	105.5	27.1	30.8	33.7	37.6	129.2	23	29	39
LCS INDUSTRIES	30-Sep	9.2	8.6	8.9	9.3	36.0	9.6	6.6	7.3	7.6	31.1	-14	-20	-18
TELERATE	30-Sep	72.8	79.8	86.0	97.2	335.8	109.4	109.4	112.3	114.0	445.1	33	28	24
TOTALS		173.2	185.0	196.3	214.5	769.0	231.9	241.0	254.7	270.7	998.3	30	29	28

PUBLIC ELECTRONIC INFORMATION SERVICES COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/ 1987 %(+/-)	Last 3 Rolling Quartrs	Last 2 Rolling Quartrs
ACXIOM	31-Mar	0.4	0.7	0.8	1.3	3.2	0.6	1.1	1.3	0.8	3.8	19	14	-1
CUC INTL	31-Jan	3.3	4.2	4.7	5.2	17.4	6.0	6.5	6.9	-30.6 ¹	-11.2	-164	-222	-340
EPSILON	31-May	-0.1	-0.1	-0.1	0.6	0.3	0.2	0.3	0.3	0.2	1.0	291	134	5
INFO. RESOURCES	31-Dec	1.4	1.2 ²	-2.4	-3.3 ³	-3.0	-1.3	-0.1	0.5	1.1	0.2	107	134	128
LCS INDUSTRIES	30-Sep	0.4	0.0	-0.5	0.0	-0.1	0.1	-0.2	0.5	0.1	0.5	749	189	226
TELERATE	30-Sep	15.5	17.3	19.2	23.3	75.2	23.3	23.3	23.6	20.5	90.7	21	13	4
TOTALS		20.9	23.3	21.7	27.1	93.0	28.9	30.9	33.1	-7.9	85.0	-9	-22	-48

Footnotes

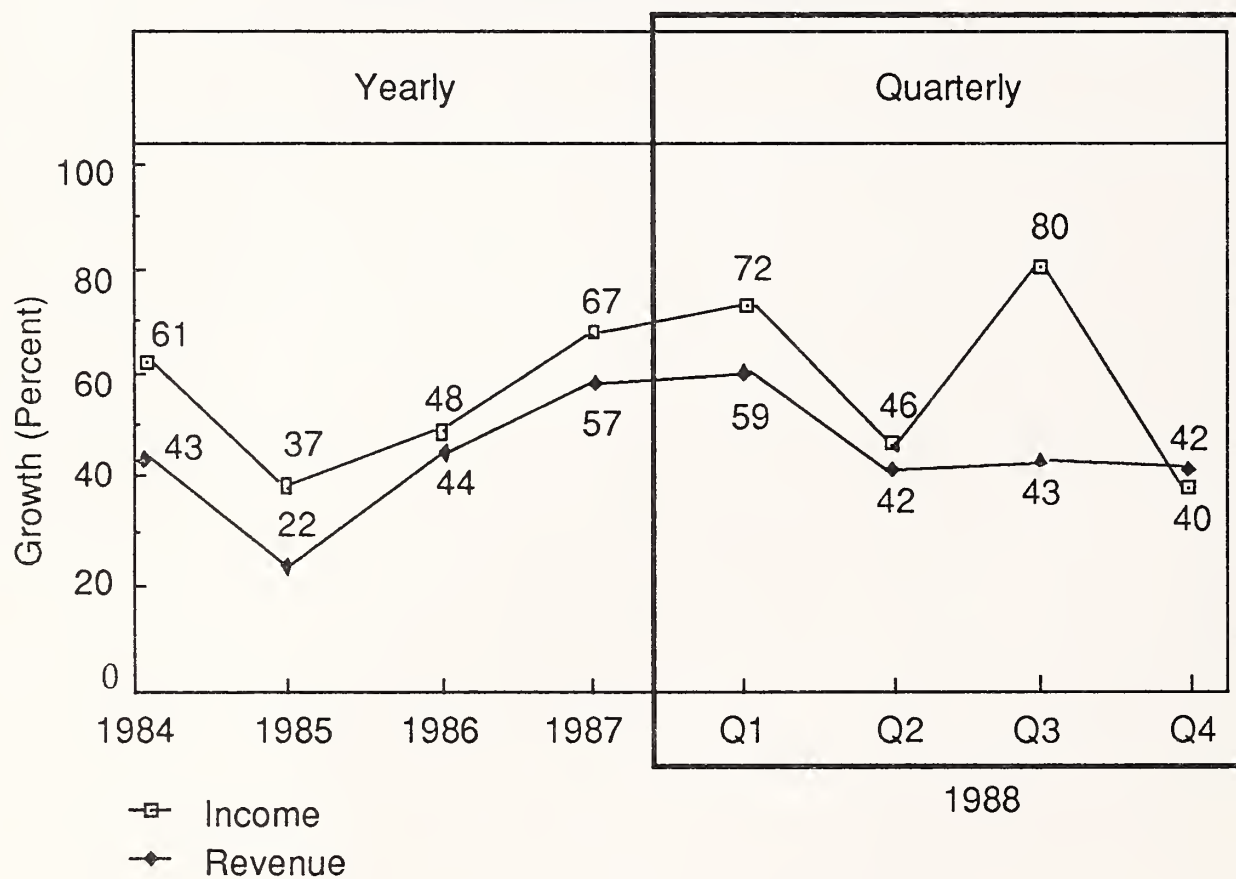
1. CUC International's fourth quarter loss was due to a change in accounting methods.
2. Information Resources' drop in earnings the first two quarters of 1987 was attributed to expenses related to the introduction of INFOSCAN.
3. Information Resources' third and fourth quarter losses were attributed to costs associated with the defunct merger with Dun & Bradstreet, the write-off of a lease obligation, and INFOSCAN expenses.

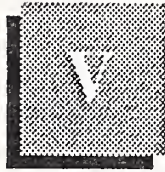


Systems Software Products Trends Analysis



PUBLIC SYSTEMS SOFTWARE PRODUCTS VENDORS





Systems Software Products Trends Analysis

During the past five years, growth for the public systems software vendors that INPUT tracks in this Vendor Financial Watch has been very high. Although the group has performed well, the growth rates may be misleading, since much of the growth has come from acquisitions. The most substantial growth from an acquisition was Computer Associates' acquisition of UCCEL. INPUT had been tracking the performance of UCCEL at the time, but has since removed the company from its list of systems software vendors. Since the acquisition, the company's revenue has been reported as Computer Associates' revenue, resulting in a 53% growth rate for Computer Associates in 1988.

Growth for these vendors was 46% in 1988, compared to 57% and 44% in 1987 and 1986, respectively. Growth is expected to remain high for the group for a couple of reasons. First of all, INPUT maintains that application development tools have been and will remain an important and growing market. Secondly, the many so called "add-on" products in the systems software market will contribute to continued growth.

Earning growth for this group of vendors has also been high during the past five years. In 1988, earnings grew 56% over 1987 results, with most of the vendors performing well throughout the year. The exceptions were ALPNET, Cullinet, Informix Software, On-Line Software, and Synercom Technology. Cullinet's \$42.4 million loss for the year, the most significant loss sustained by the group, was attributed to the restructuring of the company, revaluing certain purchased software assets, and writing off selected receivables.

The profitability situation for this group of vendors remained excellent in 1988, despite Cullinet's performance. The 13% profit margin attained by the group was well above the average for the industry.

Note that VM Software has changed its name to Systems Center. Results include the company's merger with TSCI.

PUBLIC SYSTEMS SOFTWARE PRODUCTS COMPANIES

		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 %(+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ADOBE SYSTEMS	30-Nov	6.9	8.7	9.9	12.3	37.8	14.2	18.8	25.2	25.3	83.5	121	125	128
ASHTON TATE	31-Jan	60.2	63.6	68.0	75.5	267.3	72.4	71.9	75.7	87.3	307.3	15	13	14
ALPNET	31-Dec	1.1	0.9	0.8	0.8	3.5	6.3 ¹	5.2	6.1	6.3	23.9	578	635	703
BGS SYSTEMS *	31-Jan	3.1	3.7	3.4	5.3	15.4	3.9	4.2	4.5	4.5	17.1	11	7	4
BOOLE & BABBAGE	30-Sep	10.0	10.3	12.1	12.3	44.8	14.0	14.0	16.4	17.1	61.5	37	37	37
COGNOS	28-Feb	18.7	19.5	18.4	18.0	74.7	27.0	22.2	24.4	25.2	98.8	32	28	36
COMPUTER ASSOC.	31-Mar	102.0	139.3	168.3	195.1	604.7 ²	206.4	185.7	223.7	309.4	925.2	53	43	47
CULLINET	30-Apr	61.1 ³	49.0	49.1	54.2	213.4	64.3	43.9	52.5	47.1	207.8	-3	-6	-4
DUQUESNE SYS.	30-Sep	9.8	9.1	10.2	12.0	41.0	12.4	12.0	13.8	15.3	53.5	30	31	31
INFODATA SYS.	31-Dec	3.2	2.5	2.8	3.0	11.5	2.8	2.9	3.3	3.3	12.3	7	14	13
INFORMIX S/W	31-Dec	7.1	9.1	11.4	14.0	41.6	25.8 ⁴	26.1	23.7	27.9	103.5	149	125	104
INTELLICORP	30-Jun	5.5	5.8	5.1	5.0	21.3	5.0	5.4	5.4	5.1	20.9	-2	1	5
MICROSOFT	30-Jun	98.4	99.8	102.6	155.9	456.7	161.8	170.5	176.4	209.8	718.5	57	55	49
MORINO ASSOC.	30-Jun	9.1	8.0	9.2	12.5	38.8	12.2	10.8	11.2	15.4	49.6	28	26	22
ON-LINE S/W	31-May	19.8 ⁵	21.4	18.5	16.9	76.7	23.6	18.8	18.6	20.2	81.2	6	1	10
ORACLE	31-May	34.9	50.4 ⁶	41.3	60.3	186.9	76.3	104.2	90.6	123.7	394.8	111	110	111
PANSOPHIC	30-Apr	34.9	33.6	37.4	43.6	149.6	50.6	40.9	44.4	53.0	188.9	26	21	20
SAGE SOFTWARE	30-Apr	4.3	2.8	3.4	4.1	14.6	4.3	3.6	4.4	4.8	17.1	17	25	23
SYNERCOM TECH.	31-Oct	2.5	2.9	3.5	4.1	13.0	2.9	3.2	3.2	4.2	13.5	4	1	-3
SYSTEMS CENTER	31-Dec	6.9	8.2	7.6	13.3	36.0	9.3	12.6	12.0	17.8	51.7	44	46	43
TOTALS		499.6	548.6	583.0	718.2	2349.3	795.5	776.9	835.5	1022.7	3430.6	46	42	43

* INPUT ESTIMATE

PUBLIC SYSTEMS SOFTWARE PRODUCTS COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ADOBE SYSTEMS	30-Nov	1.6	2.0	2.3	2.7	8.6	3.6	4.5	6.4	6.7	21.2	147	152	162
ASHTON TATE	31-Jan	9.1	10.1	11.1	12.8	43.1	11.1	11.5	11.7	13.4	47.7	11	8	5
ALPNET	31-Dec	0.2	-1.1	-1.4	-4.7	-7.1 ⁷	-0.5	-1.5	0.1	-4.0	-5.9 ⁸	16	26	36
BGS SYSTEMS *	31-Jan	0.0	0.2	0.2	0.2	0.5	0.5	0.5	0.8	0.8	2.6	415	283	328
BOOLE & BABBAGE	30-Sep	0.5	0.5	0.6	3.9	5.6	0.9	0.8	1.0	1.0	3.7	-34	-45	-56
COGNOS	28-Feb	1.8	1.5	1.2	-1.8	2.7	2.2	0.5	1.4	1.2	5.3	97	246	511
COMPUTER ASSOC.	31-Mar	11.2	4.1	16.0	42.8	74.1 ⁹	33.8	16.9	28.9	62.7	142.3	92	73	56
CULLINET	30-Apr	-4.1	8.0	-5.8	-12.7 ¹⁰	-14.6	-20.5 ¹¹	-5.3	-0.4	-16.2	-42.4 ¹²	-189	-108	10
DUQUESNE SYS.	30-Sep	2.2	1.8	2.2	2.7	8.9	2.7	2.5	3.2	3.6	12.0	35	39	39
INFODATA SYS.	31-Dec	0.3	0.1	0.2	0.6	1.1	0.2	0.1	0.0	0.2	0.5	-59	-64	-75
INFORMIX S/W	31-Dec	0.8	1.2	1.9	2.0	5.9	2.5	1.5	-0.5	-3.1 ¹³	0.4	-93	-141	-191
INTELLICORP	30-Jun	0.1	-2.7	-0.6	-1.0	-4.3 ¹⁴	-0.3	0.4	0.3	0.0	0.4	109	116	119
MICROSOFT	30-Jun	19.1	17.3	21.3	35.3	92.9	37.3	30.0	36.6	47.5	151.4	63	55	49
MORINO ASSOC.	30-Jun	2.3	0.8	1.6	3.0	7.7	2.5	1.5	1.6	3.5	9.1	19	22	12
ON-LINE S/W	31-May	1.5	1.7	1.0	1.7	5.9	1.9	-4.0	-0.2	-0.4 ¹⁵	-2.7	-146	-204	-122
ORACLE	31-May	4.8	7.6	3.2	7.7	23.3	13.0	19.1	7.1	17.2	56.4	142	135	125
PANSOPHIC	30-Apr	4.6	2.6	4.2	7.7	19.1	5.7	0.9	3.7	9.0	19.3	1	-6	7
SAGE SOFTWARE	30-Apr	0.7	0.2	0.3	0.6	1.8	0.4	0.1	0.5	0.8	1.8	0	30	55
SYNERCOM TECH.	31-Oct	-1.0	-0.5	-2.2	0.1	-3.6 ¹⁶	-0.8	-0.6	-0.7	0.5	-1.6	56	70	91
SYSTEMS CENTER	31-Dec	0.8	0.1	0.2	2.3	3.4	0.6	1.8	1.5	3.5	7.4	117	159	99
TOTALS		56.4	55.6	57.1	105.9	275.0	96.8	81.2	101.7	147.3	427.0	56	52	54

Footnotes

1. Automated Language Processing Systems' (ALPNET's) revenue includes the results of several acquisitions.
2. Computer Associates' revenue includes results of the UCCEL acquisition.
3. Cullinet's revenue reflects the 1987 business combination with Distribution Management Systems.
4. Informix Software's revenue growth reflects the acquisition of Innovative Software.
5. On-Line Software's revenue reflects the products acquired from Martin Marietta in October 1986.
6. Oracle's improved revenue in the past two quarters reflects an increased number of installations as Oracle increased the number of computers and operating systems on which ORACLE operates. Some of the increase in revenue was due to unbundling of products.
7. ALPNET's losses reflected a decrease in computer systems sales, which reportedly resulted from management's decision to shift its focus in the translation market from that of a software provider to that of a full translation services provider. In addition, the loss included increased costs associated with advertising, the company's acquisition strategy, and relocation of headquarters.
8. ALPNET's loss for the year included \$3.2 million for reductions related to the restructuring of ALPNET's Canadian and Swiss subsidiaries. The restructuring included the write-off of goodwill in Canada, as well as the carrying value of certain other assets in these operations. The balance of the loss was attributed to the company's computer software business.
9. See footnote 2.
10. Cullinet's loss during its third quarter of fiscal 1988 included a \$13.7 million pretax charge for the write-down of outdated main-frame software purchased a year or more earlier, as well as the adjustment of accounts receivable and some notes reflecting restructured arrangements with overseas sales representatives.
11. Cullinet sustained a loss before taxes of \$24.0 million, which included a one-time charge of \$14.8 million for a restructuring of the company. The realignment of functions within the organization included a divestiture of the remaining assets of Computer Pictures Corporation and a reduction in force of approximately 400 employees.

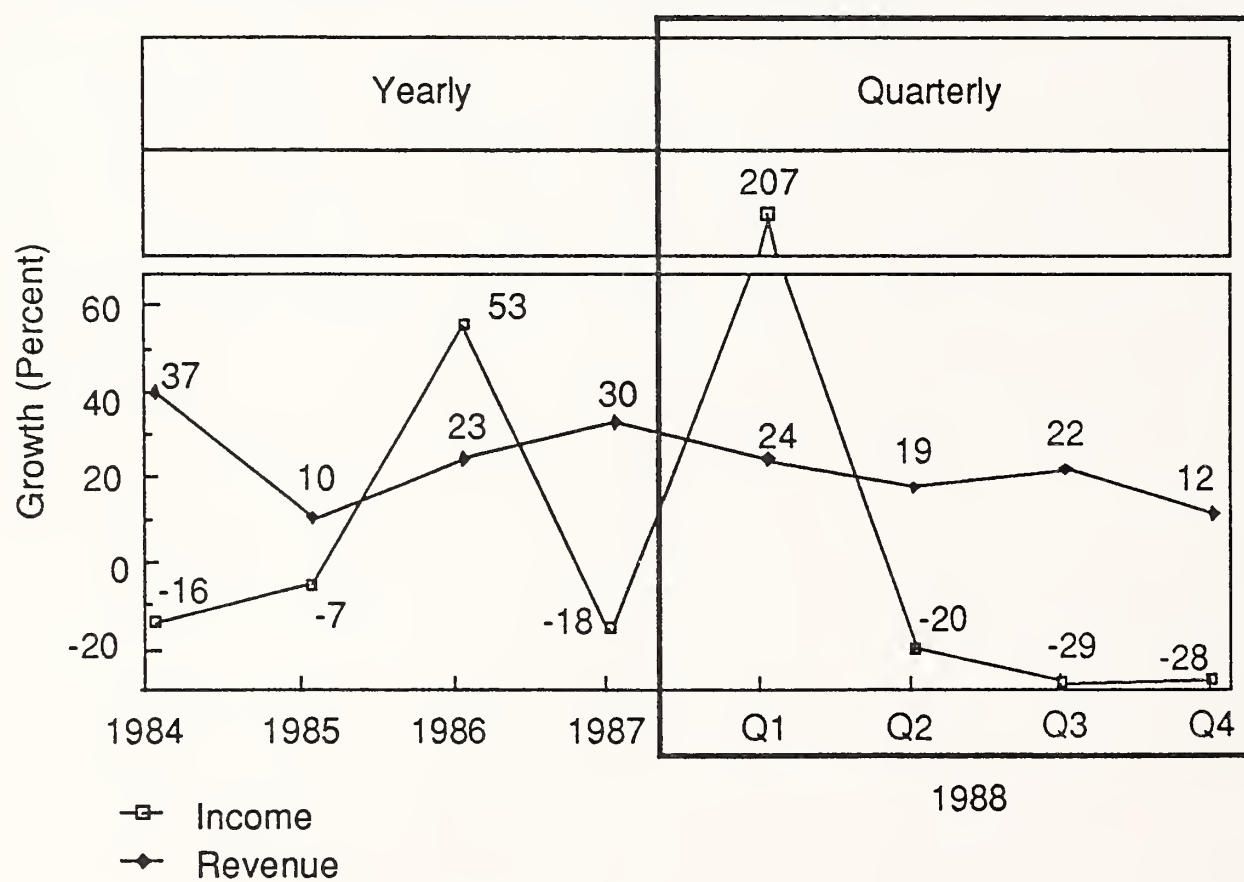
12. Cullinet's 1988 losses were primarily the result of \$14.8 million in restructuring costs—severance payments, outplacement services, the write-down of assets associated with divested businesses, and facilities consolidation expense—and \$13.7 taken to revalue certain purchased software assets and write off selected receivables.
13. Informix's third and fourth quarter losses were attributed to continued delays in the release of its Wingz integrated spreadsheet and SmartWare II office automation software.
14. Intellicorp's loss during its fourth fiscal quarter included write-offs of obsolete hardware inventory and costs associated with a reduction in staff.
15. On-Line Software attributed its fourth fiscal quarter loss to nonrecurring expenses related to the closing of some facilities and severance pay, in addition to expenses for a new computer system and hiring of additional sales and support staff.
16. Synercom Technology's loss resulted from costs associated with the company's movement out of selling workstations, in addition to a major reorganization of management.

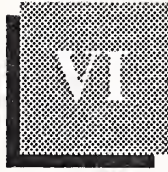


Application Software Products Trends Analysis



PUBLIC APPLICATION SOFTWARE PRODUCTS VENDORS





Application Software Products Trends Analysis

Application software products vendors have grown steadily during the past few years. In 1988, revenues for the group grew 19% over the previous year. This growth represents a slowdown for the group, indicative of a mature market segment.

Much of the growth in the applications software market took place in the early 1980s, with the introduction of personal computers and many cross-industry type applications. (Cross-industry applications are those used by all industries, for example accounting, word processing, and spreadsheets.) With the introduction of personal computers and the reduction in price of mainframe and minicomputer hardware, many companies began to handle their own information processing needs in-house. Even in the cases where companies developed their own software in-house, they often utilized off-the-shelf applications to supplement the software developed in-house.

Newer growth opportunities within the applications software market exist in the industry-specific markets, although any one of these industries represents a smaller market than the large cross-industry markets mentioned above.

During the past five years, growth in earnings has fluctuated continuously from quarter to quarter and year to year. In 1988, earnings grew 69% for the group. However, the growth was primarily due to MSA's performance. The \$33.5 million loss that MSA took in 1988 represented a substantial improvement over the \$71.0 million loss the company took in 1987. (The company attributed its 1987 results to a change in accounting methods; the loss in 1988 was attributed to restructuring of the organization, which included staff and space reductions and adjustments to capitalized software.)

Profitability for the applications software products group ran slightly above average in 1988 at 8%.

Note that Health Information Systems, which recently became American Healthware, was removed from the list of public application software products vendors because it is no longer a public company.

PUBLIC APPLICATION SOFTWARE PRODUCTS COMPANIES

		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/ 1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
AMERICAN S/W	30-Apr	12.8	11.2	13.5	15.2	52.7	14.3	15.3	14.9	19.7	64.2	22	25	21
AUTODESK	31-Jan	17.3	18.8	20.2	23.0	79.3	25.8	27.3	30.3	34.0	117.4	48	48	49
COMSHARE	30-Jun	17.4	18.6	17.3	21.7	75.0	19.5	20.4	18.9	24.1	82.9	11	10	10
CYBERTEK	31-Mar	6.4	5.2	5.9	5.4	22.8	5.8	5.2	5.1	4.8	20.9	-8	-8	-12
CADENCE DESIGN	31-Dec	4.9	5.7	6.1	7.1	23.9	7.3	15.2 ¹	18.1	20.7	61.3	156	185	194
GENESSEE *	31-May	0.2	0.2	0.2	0.3	1.0	0.3	0.4	0.3	0.3	1.3	33	36	21
HOGAN SYSTEMS	31-Mar	13.4	11.4	10.4	12.1	47.2	12.8	10.8	13.4	11.1	48.1	2	4	9
INFO. SCIENCE	30-Apr	3.7	3.2	2.8	2.8	12.4	2.8	2.9	3.2	3.5	12.4	-1	10	20
LOTUS DEVELOP.	31-Dec	84.8	94.0	101.2	115.6	395.6	117.3	122.1	116.8	112.4	468.6	18	13	6
MACNEAL-SCHW.	31-Jan	7.8	8.5	8.6	9.7	34.5	9.7	10.1	9.7	10.5	40.0	16	13	11
MSA	31-Dec	53.4	82.6	56.8	65.7	258.5	62.9	68.9	58.9	59.3	250.0	-3	-9	-4
MICROPRO INTL	31-Aug	9.2	11.4	12.3	10.3	43.2	10.1	10.0	12.1	9.7	41.9	-3	-6	-4
POLICY MGMT	31-Dec	41.5	43.6	46.2	48.8	180.1 ²	50.0	54.1	55.4	57.4	216.9	20	20	19
SCIENTIFIC S/W	31-Dec	6.5	6.7	5.8	8.5	27.6	4.7	5.5	7.0	6.4	23.6	-15	-10	-7
SILVAR-LISCO	30-Apr	7.7	5.9	6.1	6.2	25.9	5.9	5.9	4.6	4.6	21.0	-19	-17	-25
SOFTWARE PUB.	30-Sep	10.9	8.3	10.7	14.0	43.9	15.2	20.0	23.9	23.2	82.3	88	103	91
S/W SVC AMER.	31-May	1.2	1.8	2.9	1.3	7.2	2.1	1.5	0.7	3.1	7.4	3	-11	-10
STOCKHLDR SYS.	31-Mar	4.8	4.1	5.0	5.2	19.0	5.8	4.3	4.8	6.0	20.9	10	6	6
SYSTEM SOFT.	31-Oct	6.4	8.6	11.0	11.5	37.5 ³	14.0	14.8	21.2	20.6	70.6	88	82	85
TIMBERLINE S/W	31-Dec	1.9	1.9	1.8	2.1	7.7	2.2	2.1	2.1	2.6	9.0	17	19	22
TOTALS		312.3	351.5	344.7	386.4	1395.0	388.5	416.8	421.4	434.0	1660.7	19	18	17

* INPUT ESTIMATE

PUBLIC APPLICATION SOFTWARE PRODUCTS COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
AMERICAN S/W	30-Apr	2.1	1.3	2.5	3.9	9.7	2.7	3.2	2.7	4.5	13.1	35	36	13
AUTODESK	31-Jan	3.9	4.8	5.4	6.4	20.5	7.2	7.6	8.5	9.3	32.6	59	52	50
COMSHARE	30-Jun	0.4	0.6	-0.9 ⁴	1.4	1.5	0.8	0.7	0.2	1.9	3.6	135	157	333
CYBERTEK	31-Mar	0.3	-0.3	0.2	0.3	0.5	0.1	-0.2	0.1	-0.2	-0.2 ⁵	-140	-267	-122
CADENCE DESIGN	31-Dec	0.3	0.8	0.9	1.1	3.2	1.1	1.5	4.4	4.8	11.8	273	279	353
GENESSEE *	31-May	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	-47	-100	-100
HOGAN SYSTEMS	31-Mar	3.4 ⁶	1.9	-2.8	1.9	4.3	1.1	-5.9 ⁷	2.4	2.1	-0.3	-106	-244	577
INFO. SCIENCE	30-Apr	-0.5	-0.9	-2.7	-0.6	-4.7	-0.6	-0.3	0.0	0.1	-0.8	83	95	103
LOTUS DEVELOP.	31-Dec	13.7	16.3	19.1	22.9	72.0	18.3	17.3	14.3	9.0	58.9	-18	-30	-45
MAGNEAL-SCHW.	31-Jan	2.0	2.2	2.4	2.5	9.1 ⁸	2.2	2.2	2.0	2.5	8.9	-2	-6	-8
MSA	31-Dec	-72.6 ⁹	18.7	-8.4	-8.7	-71.0	2.4	5.8	-28.3	-13.4	-33.5 ¹⁰	53	-2347	-144
MICROPRO INTL	31-Aug	0.5	1.6	0.8	0.0	2.9	-2.2 ¹¹	-1.8	-1.1	-2.6	-7.7 ¹²	-367	-335	-568
POLICY MGMT	31-Dec	3.9	4.0	4.4	4.7	17.1	4.8	4.8	5.3	5.6	20.5	20	19	19
SCIENTIFIC S/W	31-Dec	0.1	0.2	0.0	0.3	0.5	-1.6	-1.5	0.5	0.4	-2.2 ¹³	-516	-230	192
SILVAR-LISCO	30-Apr	0.4	-4.8	-0.8	0.1	-5.1 ¹⁴	0.0	0.0	-2.0	-1.4	-3.4 ¹⁵	34	38	-393
SOFTWARE PUB.	30-Sep	1.6	0.9	1.5	2.5	6.5	2.8	3.9	4.3	3.8	14.8	129	146	103
S/W SVC AMER.	31-May	0.2	0.0	0.1	0.2	0.5	0.0	-0.1	0.0	0.1	0.0	-102	-100	-67
STOCKHLDR SYS.	31-Mar	0.8	0.5	1.0	0.9	3.2	1.0	0.4	0.9	1.2	3.5	11	7	12
SYSTEM SOFT.	31-Oct	0.7	1.0	1.1	1.1	3.9	1.0	1.6	2.6	2.0	7.2	86	95	114
TIMBERLINE S/W	31-Dec	0.1	0.0	0.1	0.2	0.4	0.1	0.1	0.1	0.1	0.4	-4	-14	-36
TOTALS		-38.8	49.0	23.8	41.2	75.2	41.3	39.3	16.9	29.8	127.3	69	-25	-28

* INPUT ESTIMATE

Footnotes

1. Cadence Design Systems is the successor of ECAD Inc. and SDA Systems Inc., which merged into ECAD in May 1988. Results of operations reflect the merger.
2. Policy Management Systems' results include several acquisitions, including Allied Research, Oregon and Consolidated Insurance Services, Aavant Health Management Group, Jensen and More, and Nationwide Computer Services.
3. System Software Associates' results include the acquisitions of ASE Services and Outlook Inc.
4. Comshare's loss was attributed to lower than expected sales by the company's European subsidiary, Comshare Ltd.
5. Cybertek's loss reflected decreased revenues from consulting services and weak mainframe software products sales.
6. Hogan Systems' results were attributed to increases in all revenue categories, coupled with cost control measures implemented during the year.
7. Hogan Systems' loss included a nonrecurring write-off of \$3.6 million associated with the suspension of development efforts on a micro-to-mainframe communications software product.
8. MacNeal-Schwendler acquired A.O. Smith's subsidiary, CAD COMP.
9. MSA's 1987 results were due to a change in accounting methods used, including a change in revenue recognition.
10. MSA took a one-time charge of \$32.6 million during 1988, related to staff and space reductions and adjustments to capitalized software.
11. Micropro's loss was attributed primarily to higher product costs, significant investments in customer service, restructuring costs, and the establishment of reserves for inventory obsolescence and potential tax liabilities.
12. Micropro's 1988 losses were primarily due to higher product costs, significant investments in customer service, restructuring costs, and the establishment of reserves for inventory obsolescence and potential tax liabilities.

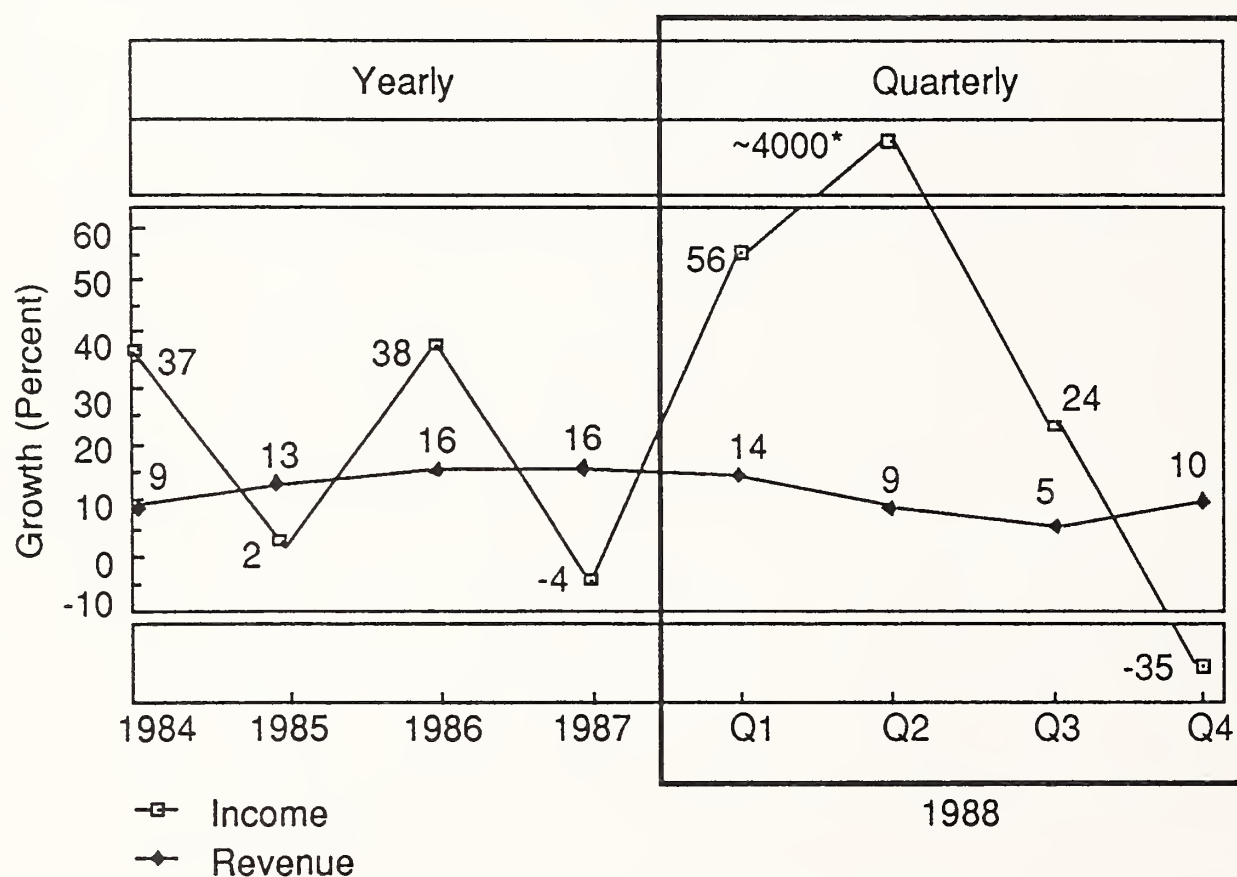
13. Scientific Software's first and second quarter 1988 losses were the result of decreased revenues. The sales decline was due to the instability of oil prices, which caused the company's clients to postpone budgeted expenditures. Scientific Software's sales improved during the second half of 1988, and the company returned to profitability.
14. Silvar-Lisco's results were restated to reflect a change in revenue recognition methods and include the cumulative effect on prior years.
15. Silvar-Lisco's fiscal 1989 losses were the result of restructuring costs, a write-off of fixed assets in inventory, capitalized software costs, and an R&D contract settlement. In addition, revenue decreased as a result of lower R&D sales, IBM sales, and license fees. Expenses remained relatively stable, although royalty fees were up slightly from the prior year.



Government Professional Services Trends Analysis



PUBLIC GOVERNMENT PROFESSIONAL SERVICES VENDORS



* Due to \$18.3 million loss taken by BBN during second quarter calendar year 1987.



Government Professional Services Trends Analysis

Growth in the government professional services vendors has been moderate for most of the past five years, with only two quarters growing at 19% over the comparative quarter the prior year. Revenues for these companies grew an average of 10% in 1988, compared to 16% for both 1987 and 1986.

Professional services for the government represents a mature market targeted by several large vendors, the largest being Computer Sciences Corporation. In 1988, Computer Sciences generated revenues in excess of \$1.25 billion, equal to growth of 11% for the year. Other large government professional services firms include American Management Systems (AMS), Bolt Beranek & Newman (BBN), C.A.C.I., Logicon, and Sterling Software. Of the largest companies, AMS grew the fastest in 1988 (22%).

For the most part, growth in earnings has been strong during the past five years for the government professional services vendors, although the group experienced a drop in earnings during the first two quarters in 1987 and the fourth quarter of 1988. During second quarter 1988, the group's earnings rose astronomically (approximately 4000%) due to the \$18.3 million loss that BBN incurred during second quarter 1987, which virtually negated earnings for the group as a whole.

During fourth quarter 1988, earnings fell 35% from the prior year period. The decrease was due to the results of BBN, Computer Data Systems, Logicon, and Sterling Software. With the exception of BBN, no one company sustained a significant drop in earnings. BBN's results were attributed to the poor performance of its BBN Communications subsidiary. For the year 1988, earnings growth for the group was 37%, compared to a drop in earnings of 4% in 1987 and an increase of 38% in 1986.

Profitability for government professional services vendors is well below average for information services vendors overall. In 1988, the group earned 4% on revenues.

Note that 202 Data Systems was removed from the list of public government professional services vendors, since the company was not generating revenues during the latter part of 1988. The company was in a liquidation process, as a result of a shareholder decision made in mid-1988. Shareholders have since (March 1989) reconsidered and put a hold on the liquidation.

PUBLIC GOVERNMENT PROFESSIONAL SERVICES COMPANIES

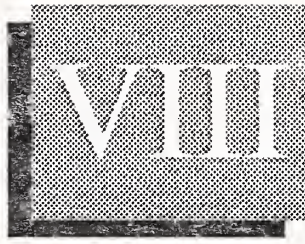
		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
AMER. MGMT SYS.	31-Dec	38.1	41.0	44.7	50.5	174.3	50.1	50.8	53.7	58.7	213.3	22	20	18
BBN	30-Jun	59.1	72.4 ¹	70.2	78.1	279.8	79.5	77.4	69.8	75.4	302.1	8	1	-2
C.A.C.I.	30-Jun	29.7	33.8	34.1	33.7	131.3	33.7	36.7	35.5	38.4	144.3	10	9	9
COMPUTER DATA	30-Jun	13.3	14.8	16.2	16.8	61.1	16.4	16.6	19.1	26.2	78.3	28	29	37
CSC	31-Mar	290.5 ²	274.6	281.3	287.3	1133.7	309.1	299.3	299.5	345.5	1253.4	11	12	13
DYNAMICS RES.	25-Dec	18.4	21.5	21.0	30.6	91.5	20.4	22.0	20.2	30.3	92.9	2	-1	-2
INTERMETRICS	28-Feb	11.4	11.3	12.2	12.0	47.0	11.8	12.8	12.3	12.0	48.9	4	4	0
LOGICON	31-Mar	53.8	47.9	53.1	56.7	211.5	61.3	56.8	57.2	55.7	231.0	9	8	3
SOFTECH	31-May	9.9	12.4	10.9	12.3	45.5	12.4	12.2	10.7	11.2	46.5	2	-4	-6
STERLING S/W	30-Sep	46.0	46.8	52.1	52.1	197.0	50.2	42.6	45.3	40.7	178.8	-9	-15	-17
TELOS	31-Mar	20.5	22.0	24.1	25.8	92.4	27.4	27.3	28.9	28.6	112.2	21	18	15
TOTALS		590.6	598.6	619.8	656.0	2465.0	672.3	654.5	652.2	722.7	2701.7	10	8	8

PUBLIC GOVERNMENT PROFESSIONAL SERVICES COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 %(+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
AMER. MGMT SYS.	31-Dec	1.1	1.3	1.9	3.3	7.6	0.9	1.7	0.6	4.1	7.3	-4	-2	-10
BBN	30-Jun	3.7	-18.3 ³	4.1	4.3	-6.1	4.5	5.1	8.7	-5.9 ⁴	12.4	304	180	-67
C.A.C.I.	30-Jun	0.6	0.9	1.0	1.0	3.6	1.0	1.0	1.1	1.1	4.2	18	10	9
COMPUTER DATA	30-Jun	0.4	0.6	0.8	0.9	2.7	0.7	0.7	0.3	-0.2	1.5	-44	-65	-94
CSC	31-Mar	10.8 ⁵	9.5	9.9	10.3	40.5	13.9	11.7	12.0	12.0	49.6	22	20	19
DYNAMICS RES.	25-Dec	0.7	0.8	0.9	1.4	3.7	0.7	0.6	1.0	1.8	4.1	10	11	23
INTERMETRICS	28-Feb	0.0	0.4	0.5	0.6	1.5	0.7	0.5	0.7	0.7	2.6	69	27	30
LOGICON	31-Mar	-0.7 ⁶	2.3	2.5	2.5	6.5	1.8	2.6	2.6	1.9	8.9	36	-2	-9
SOFTECH	31-May	-1.6 ⁷	0.3	0.4	0.3	-0.7	0.1	0.2	0.4	0.4	1.1	256	8	20
STERLING S/W	30-Sep	1.2	1.7	1.3	2.4	6.6	1.4	-3.7 ⁸	1.3	1.7	0.7	-90	-113	-20
TELOS	31-Mar	0.5	1.1	1.0	1.1	3.8	0.4	0.5	1.4	0.7	3.0	-20	-20	-1
TOTALS		16.7	0.5	24.2	28.2	69.7	26.1	20.9	30.1	18.3	95.4	37	31	-8

Footnotes

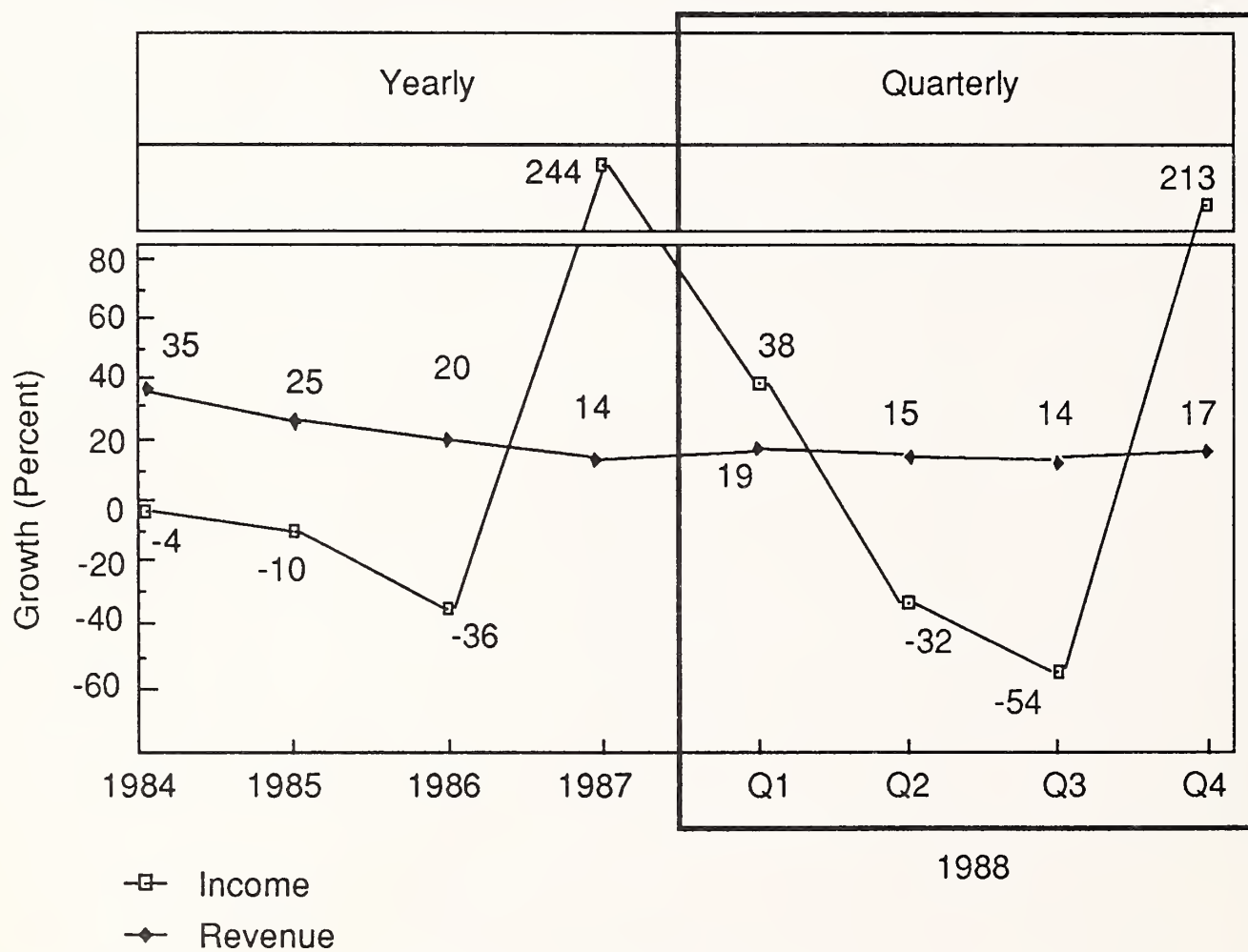
1. Bolt Beranek and Newman's (BBN's) revenue growth reflects the fiscal 1987 acquisitions of Delta Graphics Inc. and Network Switching Systems Inc.
2. Computer Sciences' principal growth area has been in federal systems and services, although revenue from all of its business sectors has grown.
3. BBN's loss included a \$22.4 million charge for development costs related to the acquisition of Network Switching Systems Inc. and the issuance of stock warrants in conjunction with the formation of two research-and-development limited partnerships.
4. BBN's loss for its second fiscal quarter was attributed to the poor performance of the BBN Communications subsidiary. The subsidiary experienced significantly lower hardware shipments than during the prior year, primarily to U.S. Government customers, and accrued significant additional costs for the installation of a worldwide data network for Japan Air Lines. Steps to reduce costs and improve performance have since been taken, including a reduction in staff and reassignment of staff to billable activities.
5. Computer Sciences' fiscal 1987 earnings increase reflected improved operating margins and a decrease in corporate charges as a percent of sales.
6. Logicon's loss was due to its decision to provide an additional \$5 million reserve for contract loss against fiscal 1987 earnings.
7. SofTech's loss included a \$2.9 million write-off of a lease commitment related to previously divested SofTech Microsystems.
8. Sterling Software's loss resulted from losses on the sale of three peripheral businesses and withdrawal from a joint venture as part of the company's strategic plan to focus on its primary software and services markets.

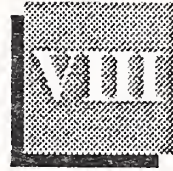


Commercial Professional Services Trends Analysis



PUBLIC COMMERCIAL PROFESSIONAL SERVICES VENDORS





Commercial Professional Services Trends Analysis

Growth for the commercial professional services vendors has been steady and strong during the past five years, although it has slowed somewhat during the past two years. Revenues for commercial professional services companies increased 16% during 1988 over 1987 results.

Results have not been consistent among the commercial professional services vendors. Advanced Computer Techniques (ACT), Systems and Computer Technology (SCT), and Teknowledge all experienced a decrease in revenues during 1988. Large increases were achieved by Analysts International, Computer Task Group, and Keane. Computer Task Group is the largest and fastest growing (29% in 1988) of the commercial professional services companies.

Earnings for this group have fluctuated. Earnings grew 62% for the year 1988 on top of 1987 growth of 244%. However, during the three years prior to 1987, earnings had declined each successive year. For fourth quarter 1988 alone, earnings grew 213% over the same period in 1987. This increase was due to the improved performance of Teknowledge, which experienced a \$6.7 million loss during fourth quarter calendar year 1987.

Profitability for the commercial professional services group was well below average and even lower than for the government professional services group in 1988. Commercial professional services companies earned only 2% of revenues on average for the year.

PUBLIC COMMERCIAL PROFESSIONAL SERVICES COMPANIES

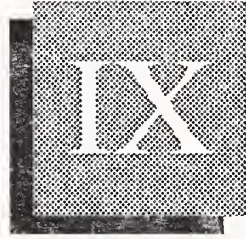
		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/ 1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ACT	31-Dec	3.2	3.7	2.1	2.0	11.0	1.7	2.3	2.0	1.2	7.2 ¹	-34	-29	-22
ANALYSTS INTL	30-Jun	15.3	15.5	16.1	17.1	64.0	18.3	18.6	20.2	21.6	78.7	23	24	26
COMP. HORIZONS	28-Feb	15.3	16.4	17.5	19.5	68.7	19.0	19.8	19.6	20.7	79.1	15	13	9
COMP. TASK GROUP	31-Dec	39.3	41.1	43.2	46.4	170.1	50.4	54.2	56.6	57.6	218.8	29	29	27
CONTINUUM	31-Mar	15.6	14.5	18.4	15.4	63.9	17.8	16.8	16.5	16.1	67.2	5	2	-3
KEANE	31-Dec	10.1	10.1	10.9	12.4	43.5	13.7	14.6	14.6	17.1	60.0	38	39	36
SYS.& COMP. TECH.	30-Sep	9.1	13.9	9.0	9.7	41.6	10.0	8.5	7.3	11.5	37.3	-10	-16	1
TECHNALYSIS	31-Dec	3.6	3.5	3.8	3.7	14.6	4.2	4.4	4.6	4.5	17.7	22	23	21
TEKNOLEDGE	30-Jun	4.6	5.0	4.4	3.8	17.8	3.5	2.6	1.7	1.7	9.5	-47	-55	-59
TOTALS		116.2	123.7	125.3	130.0	495.1	138.6	141.8	143.1	152.0	575.5	16	15	16

PUBLIC COMMERCIAL PROFESSIONAL SERVICES COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 %(+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ACT	31-Dec	0.1	0.0	0.0	-0.3	-0.1	-0.3 ²	-0.1	-0.1	-1.5	-2.0 ³	-2977	-799	-587
ANALYSTS INTL	30-Jun	0.7	0.9	0.7	0.7	3.1	0.8	0.8	1.1	1.0	3.7	21	24	46
COMP. HORIZONS	28-Feb	0.5	0.5	0.6	0.7	2.3	0.7	0.7	0.3	0.6	2.3	0	-9	-30
COMP. TASK GROUP	31-Dec	1.4	1.1	1.3	1.2	5.1	1.7	1.7	1.6	1.5	6.5	27	31	23
CONTINUUM	31-Mar	1.0	0.5	1.7	1.2	4.5	-1.0 ⁴	0.6	0.4	0.0	0.0	-100	-71	-86
KEANE	31-Dec	0.3	0.2	0.1	0.3	0.9	0.6	0.7	0.7	0.8	2.8	217	259	275
SYS. & COMP. TECH	30-Sep	-2.2	3.2	0.4	-0.6	0.7	0.2	-1.6 ⁵	-1.5	1.3	-1.6	-331	-162	13
TECHNALYSIS	31-Dec	0.3	0.3	0.3	0.4	1.3	0.4	0.4	0.4	0.5	1.7	28	23	22
TEKNOLOGY	30-Jun	-0.7	-2.9	-1.3	-6.7	-11.7 ⁶	-1.1	-0.6	-1.1	-0.7	-3.5 ⁷	70	78	78
TOTALS		1.4	3.8	3.9	-3.1	6.1	2.0	2.6	1.8	3.5	9.9	62	69	536

Footnotes

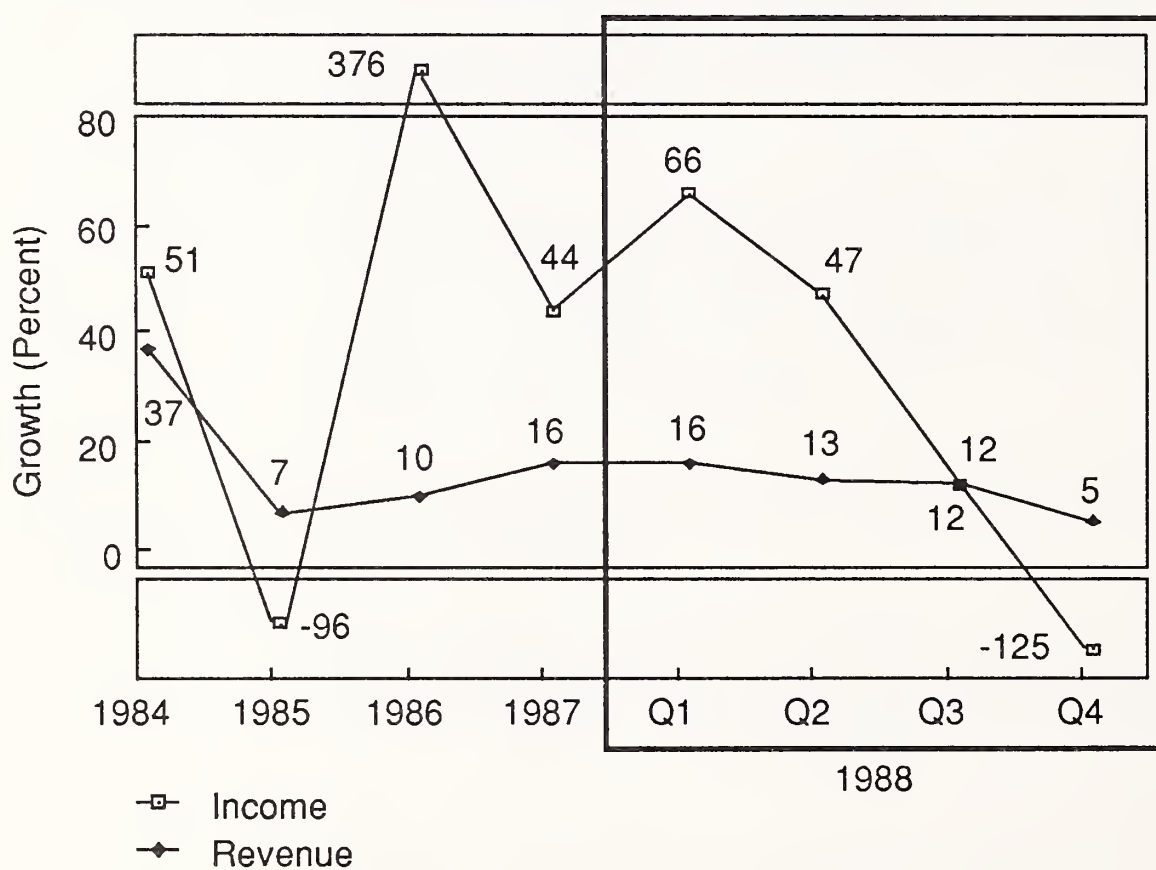
1. Advanced Computer Techniques' (ACT's) 1988 revenue decrease was attributed to (1) the transfer of the systems software division to InterACT, a newly formed corporation jointly owned with LSI Logic Corporation and (2) decreased software product license revenues from the company's CSM subsidiary.
2. ACT's loss results from the recognition of a loss on the company's interest in its joint venture with LSI Logic, in addition to a provision covering possible future losses that may result from a debtor being placed into receivership and from a client's default on an agreement with ACT's wholly-owned subsidiary, Creative Socio-Medics.
3. ACT's loss was attributed to the decrease in software product license revenues and certain other provisions, including a change in the accrual methods for completion of contracts and the relocation of the CSM subsidiary.
4. Continuum took a loss during its fourth fiscal quarter 1988 due to increased expenses, which were partially offset by increased revenues in support services. Increased expenses stemmed from costs associated with litigation initiated by the company and costs associated with the company's move to new facilities coupled with its inability to sublet existing facilities.
5. Systems and Computer Technology's (SCT's) loss was primarily due to decreased revenues combined with continuing investments in product development.
6. Teknowledge's fiscal 1987 losses were due to lower than expected software products revenue, increased marketing and sales expenses, a \$1.1 million write-off of computer hardware and capitalized software costs, and approximately \$200,000 of nonrecurring expenses.
7. Teknowledge continued to experience losses throughout 1988 as it continued its transition process from being a provider of expert systems tools and services to being a full-services oriented knowledge-processing-solutions company. The company cited lengthy contract negotiations as a contributing factor to the loss.

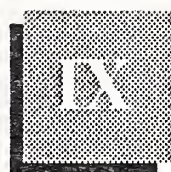


Turnkey Systems Trends Analysis



PUBLIC TURNKEY SYSTEMS VENDORS





Turnkey Systems Trends Analysis

Growth for turnkey systems vendors has been moderate to low during the past five years. Actually, much growth occurred within the small group of turnkey systems vendors INPUT tracked between 1983 and 1984. Since then, growth has slowed. In this case, the slowdown does not necessarily indicate a mature market, but rather one that may not have reached its full potential yet. Conversely, the turnkey systems market may remain viable in only a few key areas. So far, the most successful turnkey offerings have been in the area of CAD/CAM systems.

Revenue grew 11% for the turnkey systems vendors in 1988, compared to 16% in 1987. The most significant contributors to the growth in 1988 were ASK Computer Systems, Computer Consoles, Daisy Systems, Intergraph, Interleaf, and Reynolds and Reynolds. These companies also represent some of the largest turnkey systems vendors.

Earnings growth for the turnkey systems group has been somewhat volatile during the past five years. In 1985, the group's earnings fell significantly each quarter from the year earlier period. Since then, earnings improved every quarter, sometimes dramatically, until fourth quarter 1988. During fourth quarter, earnings fell 125% from the prior year period due to the \$66.0 million loss incurred by Daisy Systems.

In 1988, profitability for the turnkey systems group ran below the average for information services vendors overall. The group earned 4% on the revenues it generated.

Note that Computer Designed Systems and Systems Integrators were removed from the list of public turnkey systems vendors, since they are no longer public companies.

PUBLIC TURNKEY SYSTEMS COMPANIES

		REVENUE (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ASK COMP. SYS.	30-Jun	25.4	31.4	26.6	32.3	115.8	37.0	46.5	39.3	45.5	168.3	45	45	44
AUTO-TROL TECH.	31-Dec	18.0	18.0	17.8	22.2	76.0	19.2	19.0	17.8	18.3	74.3	-2	-5	-10
AVANT-GARDE	30-Apr	3.3	5.6	4.7	3.8	17.4	2.6	3.8	3.0	2.1	11.5	-34	-37	-40
BARRISTER INFO.	31-Mar	11.0	8.3	9.3	9.3	37.8	10.9	8.4	6.7	7.5	33.5 ¹	-11	-16	-23
C3	31-Mar	24.9	24.5	24.3	35.3	108.9	17.9 ²	14.6	17.2	17.0	66.7	-39	-42	-43
CERNER	31-Dec	5.6	7.3	8.5	12.3	33.6	11.4	10.0	10.3	8.9	40.6	21	4	-8
COMPTek RESRCH	31-Mar	10.1	10.1	10.5	12.8	43.6	14.7	12.0	12.2	12.0	50.9	17	8	4
COMPT. CONSOLES	31-Dec	35.6	35.8	37.8	39.2	148.4	39.2	42.7	44.9	49.1	175.9	19	21	22
COMPUTRAC	31-Jan	2.0	2.2	1.6	1.6	7.4	1.4	3.0	4.0	3.9	12.3	66	100	144
DAISY SYSTEMS	30-Sep	23.8	24.1	27.6	28.0	103.5	28.6	29.9	30.9	32.0	121.4	17	16	13
GERBER SCIENTIF.	30-Apr	59.8	61.8	64.4	68.8	254.8	68.9	69.5	71.6	78.4	288.4	13	13	13
HBO	31-Dec	37.4	43.7	45.0	49.1	175.2	40.7	47.5	47.6	51.6	187.4	7	6	5
INTERGRAPH	31-Dec	128.5 ³	160.2	157.1	195.3	641.1	174.7	203.5	207.2	214.8	800.2	25	22	20
INTERLEAF	31-Mar	11.8	10.5	12.7	17.0	52.1	18.1	17.1	18.4	21.3	74.9	44	41	33
ISC SYSTEMS	30-Jun	43.6	49.9	44.1	41.8	179.4	42.4	42.4	39.8	38.2	162.8	-9	-11	-9
LIBRA SYSTEMS	31-Oct	1.0	0.8	1.0	0.6	3.3	0.6	0.2 ⁴	1.5	0.9	3.2	-4	12	56
PENTA SYSTEMS	31-Dec	4.4	5.2	6.5	5.9	22.0	4.4	4.5	4.4	3.9	17.2	-22	-27	-33
REYNOLDS & REYN.	30-Sep	141.6	140.4	151.7	138.4	572.1	151.5	151.7	158.6	143.6	605.4	6	5	4
TENERA	31-Dec	9.8	9.5	8.5	8.3	36.1	8.5	8.0	7.1	8.3	31.9	-12	-11	-9
TRIAD SYSTEMS	30-Sep	26.4	28.4	35.2	26.6	116.6	30.3	30.7	36.9	30.1	128.0	10	8	8
TOTALS		623.8	677.5	695.0	748.8	2745.2	723.1	765.0	779.4	787.4	3054.9	11	10	9

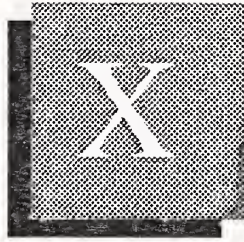
PUBLIC TURNKEY SYSTEMS COMPANIES

		NET INCOME (\$ Millions)										GROWTH (Percent)		
COMPANY NAME	FISCAL YEAR END	Q1	Q2	1987 Q3	Q4	TOTAL	Q1	Q2	1988 Q3	Q4	TOTAL	1988/1987 % (+/-)	Last 3 Rolling Quarters	Last 2 Rolling Quarters
ASK COMP. SYS.	30-Jun	1.7	2.6	1.9	2.3	8.4	2.6	4.0	2.4	3.2	12.2	46	44	35
AUTO-TROL TECH.	31-Dec	0.5	0.3	0.4	0.9	2.0	0.6	0.4	-1.4	0.2	-0.2	-110	-153	-198
AVANT-GARDE	30-Apr	-4.2	0.1	0.1	-0.4	-4.4	-2.3	-1.7	-0.6	-2.0	-6.6 ⁵	-49	-2400	-904
BARRISTER INFO.	31-Mar	1.2	0.1	0.4	-0.1	1.6	-0.2	-0.9 ⁶	-1.5	-2.0	-4.6 ⁷	-394	-1372	-1303
C3	31-Mar	2.0	2.3	2.5	7.9 ⁸	14.7	2.0	0.2	0.4	0.3	2.9	-80	-93	-93
CERNER	31-Dec	0.7	0.7	1.1	1.6	4.0	1.0	1.1	0.8	0.6	3.5	-13	-26	-47
COMPTek RESRCH	31-Mar	0.4	0.3	0.4	0.4	1.4	0.1	0.3	0.2	-0.2	0.4	-72	-71	-100
COMPTeR CONSOLES	31-Dec	0.8	0.9	0.6	9.0 ⁹	11.3	1.9	3.1	3.4	-2.4 ¹⁰	6.0	-47	-61	-90
COMPUTRAC	31-Jan	0.2	0.5	-1.0 ¹¹	0.0	-0.4	0.3	0.7	0.8	0.1	1.9	552	379	187
DAISY SYSTEMS	30-Sep	-4.9 ¹²	-10.5 ¹³	0.5	1.0	-14.0	1.3	1.7	1.3	-66.0 ¹⁴	-61.7	-342	-595	-4498
GERBER SCIENTIF.	30-Apr	6.4	6.5	7.5	7.7	28.0	7.9	7.6	7.7	8.5	31.7	13	10	6
HBO	31-Dec	0.8	2.4	3.4	6.7 ¹⁵	13.3	1.0	2.7	3.9	4.9	12.5	-6	-8	-13
INTERGRAPH	31-Dec	10.0	16.8	18.4	24.7	69.9	17.1	23.4	22.5	25.0	88.0	26	18	10
INTERLEAF	31-Mar	0.6	0.5	1.0	3.0	5.2	2.4	0.1	0.1	0.1	2.7	-48	-93	-95
ISC SYSTEMS	30-Jun	1.1	2.6	2.2	2.2	8.1	2.1	1.7	1.1	-0.4	4.5	-44	-65	-84
LIBRA SYSTEMS	31-Oct	-0.2	-0.1	0.2	-0.4	-0.5	-0.4	-0.1	-0.1	0.0	-0.6	-20	42	55
PENTA SYSTEMS	31-Dec	-0.3	-1.7 ¹⁶	0.4	0.1	-1.4	-0.5	-0.9	-1.2	-0.5	-3.1 ¹⁷	-120	-133	-411
REYNOLDS & REYN.	30-Sep	5.0	5.8	5.9	2.7	19.5	1.1	1.4	12.8	7.1	22.4	15	48	131
TENERA	31-Dec	2.2	2.4	2.2	2.1	8.9	2.1	1.8	1.8	0.3	6.0	-33	-42	-51
TRIAD SYSTEMS	30-Sep	0.9	1.2	3.6	1.3	6.9	1.3	2.4	3.3	5.2	12.2	76	79	74
TOTALS		24.9	33.3	51.5	72.7	182.5	41.4	49.0	57.7	-18.0	130.1	-29	-44	-68

Footnotes

1. Barrister Information Systems' decreased revenues have been due to delays in completing products and the transition of software to the company's new line of 32-bit computers.
2. C3 revenues and net income for the recent quarters were affected by reduced order volume on older contracts and by delays in awarding expected new contracts. The delays resulted from U.S. Government efforts to temporarily reduce spending to reach deficit goals. The company anticipates that it may continue to be affected by this cutback.
3. Intergraph's shipments were down during the quarter, resulting in lower revenue and earnings due to a temporary shortage in the microprocessor used in the company's new workstation products.
4. Libra Systems' decreased revenue was due to contract terminations.
5. Avant-Garde Computing's losses included restructuring costs that involved scaling back operations and concentrating on the Net/Command product. The loss also included a \$1.3 million write-down of certain equipment and software. Avant-Garde announced plans to be acquired by Boole & Babbage in 1989.
6. Barrister Information Systems' losses were attributed primarily to continuing investments in product development.
7. Barrister Information Systems' losses have been the result of decreased revenues combined with heavy investments in product development.
8. C3's net income included a gain on investments of \$5.6 million after taxes resulting from the initial public offering of common stock in the company's subsidiary, TEMPEST Technologies.
9. Computer Consoles' earnings improvement reflected its increased revenue level, as well as certain unusual and nonrecurring items. Those included a gain from the sale of part of \$1.7 million from repurchases of its convertible subordinated debentures.
10. Computer Consoles' \$2.4 million loss included \$2.6 million in expenses related to its acquisition by STC PLC (U.K.) that took place in early 1989.
11. CompuTrac's results included a \$1.1 million capital loss attributable to the disposal of the company's equity investments.

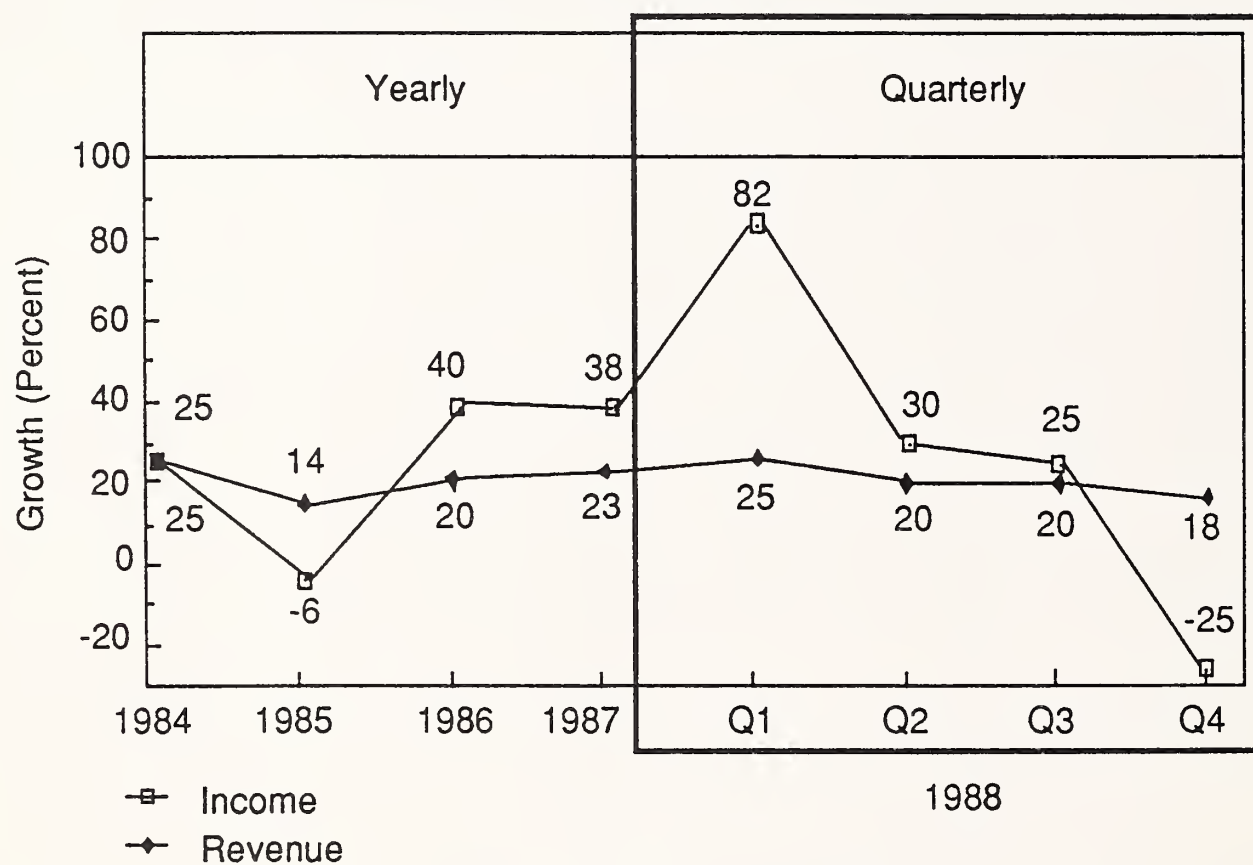
12. Daisy Systems' losses have been attributed to a weak capital spending environment combined with delayed shipments, product transition, and severance payments resulting from layoffs.
13. Daisy Systems' loss included pretax charges of \$5.1 million to cover fixed asset and inventory write-downs associated with the introduction of the company's new product line and provisions for severance and other employee benefits related to staffing changes.
14. Daisy Systems' loss was primarily due to special charges related to the Cadnetix merger. Special charges included a \$40.5 million write-off of the appraised value of technology currently being developed at Cadnetix. Other special items aggregating \$26.3 million included an \$8.5 million provision for merger-related duplicate facilities, severance and relocation costs; a \$13 million provision for fixed assets, inventory and capitalized software related to the company's old operating system, which is being replaced by a standard UNIX operating environment; and additional reserves related to subleasing idle facilities.
15. HBO's management attributes its excellent operating results in 1987 to a successful repositioning of itself during 1986, which included unbundling the pricing of its products, discontinuing the practice of discounting service agreements, selling its consulting business, reducing staff, and streamlining operations.
16. Penta Systems' loss included a \$600,000 bad-debt charge related to a Harper & Row sale, \$400,000 in reserve set up for previous recourse sales agreements, and \$200,000 in inventory write-downs.
17. Penta Systems attributed its 1988 losses to longer than anticipated sales cycles for new accounts. In early 1989, the company was able to close sales it had anticipated for 1988 as well as reduce cost levels.

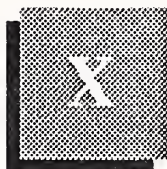


Public Information Systems Trends Analysis



PUBLIC INFORMATION SERVICES VENDORS





Public Information Systems Trends Analysis

The information services industry overall has maintained strong, steady growth during the past five years, with the exception of 1985 when the industry went through a tumultuous period. In 1988, revenues for the group overall grew 20% over the 1987 revenue level. During fourth quarter, revenues grew 18%.

The most significant growth in 1988 came from electronic information services, systems software, and applications software vendors. However, steady moderate growth was maintained by the processing/network services vendors and commercial professional services vendors.

Earnings, which have improved consistently for the information services group as a whole during the past few years, grew 18% for the year 1988, but fell 25% during fourth quarter 1988 from the year earlier period. The drop was primarily due to the performance of two vendors, Daisy Systems and CUC International, which both took significant losses during fourth quarter.

Profitability for information services vendors as a whole averaged 7% in 1988.

**PUBLIC INFORMATION SERVICES VENDORS' REVENUE
GROWTH RATES
(PERCENT)**

		Q1	Q2	Q3	Q4	TOTAL
Processing/Network Services Companies	1984	19	20	14	16	17
	1985	15	16	16	16	16
	1986	16	16	17	18	17
	1987	15	14	15	18	16
	1988	19	18	18	15	17
Electronic Information Services Companies	1984	91	79	102	46	76
	1985	29	30	22	30	28
	1986	34	49	40	43	42
	1987	38	33	31	29	32
	1988	34	30	30	26	30
Systems Software Products Companies	1984	68	68	75	57	66
	1985	32	20	12	24	22
	1986	34	51	53	39	44
	1987	58	57	52	62	57
	1988	59	42	43	42	46
Application Software Products Companies	1984	81	41	30	14	37
	1985	-2	22	6	12	10
	1986	29	17	24	24	23
	1987	31	39	34	19	30
	1988	24	19	22	12	19
Government Professional Services Companies	1984	9	10	7	9	9
	1985	10	13	12	18	13
	1986	18	17	19	10	16
	1987	14	14	16	19	16
	1988	14	9	5	10	10
Commercial Professional Services Companies	1984	51	37	30	26	35
	1985	31	26	25	18	25
	1986	11	19	22	28	20
	1987	16	16	11	13	14
	1988	19	15	14	17	16
Turnkey Systems Companies	1984	39	47	33	29	37
	1985	14	10	4	1	7
	1986	3	6	17	14	10
	1987	17	16	11	18	16
	1988	16	13	12	5	11
Total Information Services Companies	1984	29	29	23	20	25
	1985	15	16	12	14	14
	1986	16	19	23	20	20
	1987	23	24	22	25	23
	1988	25	20	20	18	20

**PUBLIC INFORMATION SERVICES VENDORS' NET INCOME
GROWTH RATES
(PERCENT)**

		Q1	Q2	Q3	Q4	TOTAL
Processing/Network Services Companies	1984	-44	23	-135	998	-1
	1985	134	34	1016	21	107
	1986	-2	-30	3	55	5
	1987	37	94	48	8	39
	1988	-12	18	3	11	4
Electronic Information Services Companies	1984	59	36	30	20	34
	1985	40	17	5	16	19
	1986	1	13	41	42	2
	1987	55	69	25	40	45
	1988	38	33	53	-129	-9
Systems Software Products Companies	1984	63	31	79	62	61
	1985	64	59	2	38	37
	1986	56	43	55	41	48
	1987	43	91	60	74	67
	1988	72	46	80	40	56
Application Software Products Companies	1984	225	-25	-27	-72	-16
	1985	-102	48	-15	155	-7
	1986	11835	-53	85	50	53
	1987	-391	611	9	-13	-18
	1988	207	-20	-29	-28	69
Government Professional Services Companies	1984	29	29	15	67	37
	1985	31	30	1	-29	2
	1986	24	47	33	49	38
	1987	-14	-97	71	41	-4
	1988	56	3982	24	-35	37
Commercial Professional Services Companies	1984	-6	24	-37	14	-4
	1985	42	-40	23	-51	-10
	1986	-176	21	-23	165	-36
	1987	118	172	340	-173	244
	1988	38	-32	-54	213	62
Turnkey Systems Companies	1984	121	91	20	26	51
	1985	-74	-88	-76	-136	-96
	1986	8	155	154	394	376
	1987	6	21	43	86	44
	1988	66	47	12	-125	-29
Total Information Services Companies	1984	28	37	-14	51	25
	1985	2	-8	16	-22	-6
	1986	13	7	43	94	40
	1987	3	76	48	33	38
	1988	82	30	25	-25	18

About INPUT

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive analysis, INPUT supports client management in making informed decisions.

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